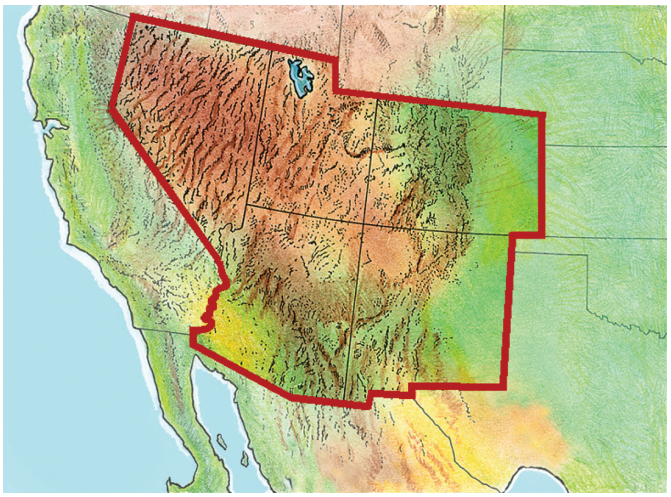
NBII Southwest Information Node

The NBII Southwest Information Node is a Web-accessible gateway to biological information for the Southwest.

Background

The National Biological Information Infrastructure (NBII) <www.nbii.gov> is an electronic information network that provides access to biological data and information on our nation's plants, animals, and ecosystems. Data and information maintained by federal, state, and local government agencies; non-government organizations; and private-sector organizations are linked through the NBII gateway and made accessible to a variety of audiences including researchers, natural resource managers, decision-makers, educators, students, and other private citizens.



Geographic coverage of the NBII Southwest Information Node

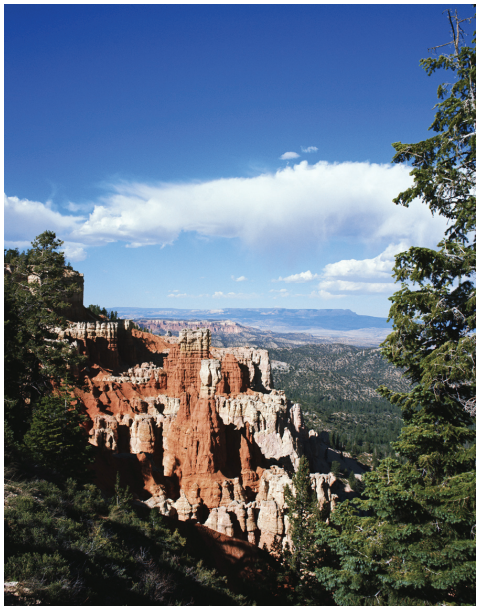
Implementation of the NBII is being accomplished through the development of nodes that serve as interconnected entry points to the NBII and the information held by partners. These nodes function as fully digital, distributed, and interactive systems that focus on developing, acquiring, and managing content on a defined subject area (thematic nodes) or a geographic region (regional nodes). One of the regional nodes currently available is the Southwest Information Node (SWIN).

Issues

In the southwestern United States, many government resource agencies, environmental organizations, corporations, and the public need access to critical biological information to more effectively address conflicting demands on natural resources. These users need information and tools to browse, model, map, simulate, forecast, interpret, and visualize biological and environmental conditions and processes and address questions such as:

- What will be the impacts of land-use decisions on habitat for threatened and endangered species?
- How will water-use scenarios affect natural resource decision making in 2020?
- Which lands are most at risk for wildland fire or invasions of exotic species?

As a Web-accessible gateway to biological information pertaining to the Southwest, SWIN meets this critical need. SWIN states include Arizona, New Mexico, Colorado, Utah, and Nevada. When fully implemented, SWIN will provide access to hundreds of biological databases involving these states and will host a suite of information tools tailored to address the complex environmental issues of the Southwest. Currently, five information resources are available.



Agua Canyon, Utah

Applications Projects

The Scientific Information Database (SID) enables users to search by project topic or agency contact for information on scientific research and collection activities on public lands in the Southwest. SID emerged from a U.S. Geological Survey partnership with the Southwest Strategy, which identified the need for a centralized database of biological research in this region. The Southwest Strategy is a

consortium of federal, state, tribal, and local agencies that work to facilitate collaborative, scientifically-based approaches to enhance community vitality and resolve resource conservation and management issues in the Southwest.

The *Water and Fire Environmental Resources (WAFER)* application serves metadata about water and wildfire data sets from federal, state, local, and tribal agencies. Both a full-text search capability and an interactive map viewer are available for accessing metadata records. The Laboratory for Environmental Spatial Analysis at New Mexico State University identified relevant water resource and wildfire data sets for inclusion in the WAFER database.

The *Southwest Threatened and Endangered Species* application allows users to view critical habitat for these species in conjunction with current and past fire perimeter data. An added map layer allows users to view critical habitat and wildfire data in proximity to specific National Wildlife Refuges and National Parks. This capability also was an outgrowth of needs identified by the Southwest Strategy.

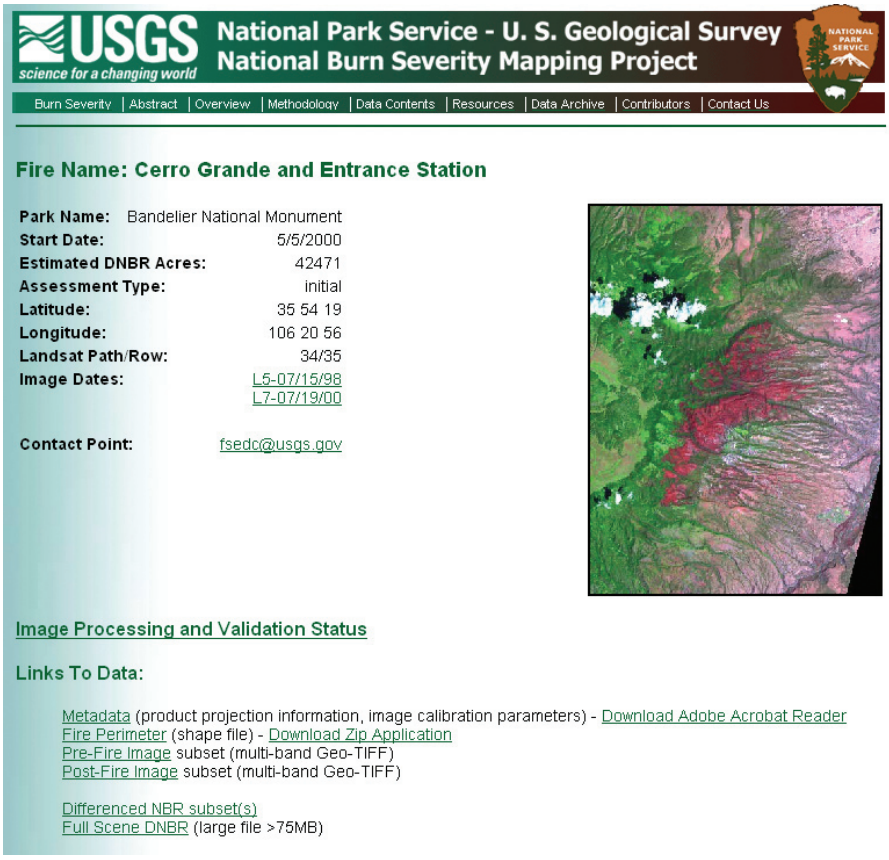
The *SWIN Interactive Mapper* allows you to view Geospatial Multi-Agency Coordination (GeoMAC) fire information in relation to land cover, land use, and watershed data, along with cities and towns, jurisdictional boundaries, roads and rail lines, contaminant sources, and data related to various U.S. Fish and Wildlife Service programs. GeoMAC is a multi-agency, Web-based tool for mapping wildfires.

Photo credit: John and Karen Hollingsworth/USFWS

Nevada yucca forest

Geographic Project

The *Great Basin Information Project (GBIP)*, initiated in October 2003, is a component of SWIN. When fully implemented, GBIP will provide consolidated and efficient access to information about the Great Basin and Columbia Plateau regions of the Intermountain West. GBIP can be accessed on the Web at <http://greatbasin.nbii.gov>.



The WAFER application serves metadata about water and wildfire data sets from federal, state, local, and tribal agencies.

Future Initiatives

In the future, SWIN will link data to additional models, establish common data sets for multi-agency projects, and continue to network scientists and managers who rely on biological information. Other plans involve maintaining and updating the data in existing applications (SID and WAFER), providing access to more biological data, and developing new applications to enhance access to these data. In addition, SWIN will continue to initiate partnerships with a variety of government agencies, academic institutions, and nonprofit organizations in the region. For example, the University of New Mexico, New Mexico State University, and Northern Arizona University have been instrumental in supporting SWIN and will continue to play key roles in future projects.

For More Information

Julie Prior-Magee
U.S. Geological Survey
National Biological Information Infrastructure Program
P.O. Box 30003, MSC 4901
Las Cruces, NM 88003
Phone: 505-646-1084
E-mail: jpmagee@usgs.gov

Leanne Hanson
U.S. Geological Survey
Fort Collins Science Center
2150 Centre Ave., Bldg. C
Fort Collins, CO 80526-8118
Phone: 970-226-9262
E-mail: leanne_hanson@usgs.gov

Find us on the Web at: <http://swin.nbii.gov>.